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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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7590 Longacre & White 6550 Rock Spring Drive Suite 240 Bethesda, MD 20817				
EXAMINER				
DESAL, NAISHADH N				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/561,848

Applicant(s)

ROULEAU ET AL.

Examiner

NAISHADH N. DESAI

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 and 18-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 18-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI-108)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Priority

1. Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not clear what applicant means by "wherein the metallic insert is disposed separate and apart from said at least one fan blade".

Separate and apart how? Examiner notes that two specific spatial directions (radial, axial, both or any other direction) are claimed to clearly identify the location of the metallic insert. To advance prosecution of case on its merits, examiner interprets the "separate and apart" as meaning that the metallic insert is disposed radially "separate and apart" from at least one fan blade. Appropriate clarification and correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1- 6,10-12,14-15 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vasilescu et al (WO 03/029658 (US7168923 relied upon as English equivalent)) in view of Abadia et al (WO 01/69762 (US 7224093 relied upon as English equivalent)).

1. Regarding claim 1, Vasilescu et al teaches:

A fan for an alternator-starter, fixed on a rotor, with magnetic poles, of the alternator-starter, the fan comprising (abstract of Vasilescu et al):

- a metallic insert fixed on the rotor (abstract), and
- a radial web and at least one fan blade, which are plastic material molded on the metallic insert (abstract of Vasilescu et al),

wherein said metallic insert (Fig 10,65) is disposed separate and apart from said at least one fan blade (Fig 10,69 shows that it is located radially separate and apart from the metallic insert).

Vasilescu et al do not teach "a magnetic target which is fixed directly onto one of said metallic insert, said radial web and said fan blade to rotate therewith, whereby said

magnetic target in association with at least one sensor, ensures magnetic following of the rotation of the rotor”.

Abadia et al teaches “a magnetic target (Fig 4,50) which is fixed directly onto one of said metallic insert, said radial web and said fan blade to rotate therewith (Fig 12,50,60 and 44,45), whereby said magnetic target in association with at least one sensor (Fig 1,52), ensures magnetic following of the rotation of the rotor (Col 1 ll 35-36),

It is well known in the art to use sensors to detect movement or position of elements. It would have been obvious to a person having ordinary skills in the art at the time the invention was made to modify the device of Vasilescu et al to have the rotor positioning devices as taught by Abadia et al. The motivation to do so would be that it would allow for detection of an angular position of a rotor with axial or radial readings, and to carry out tracking of the rotation of rotor for high speeds thereof (Col 1 ll 28-36 and Col 2 ll 1-4 of Abadia et al).

It would also have been obvious to one having ordinary skill in the art at the time the invention was made to arrange the magnetic target so that it would be disposed separate and apart from at least one fan blade, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japiske*, 86 USPQ 70. The motivation to do so would be based on the parameters of available space, size and cost of the parts and the overall efficiency desired of the device.

2. Regarding claim 2, that the magnetic target is molded in situ on the metallic insert. The method of making limitations are not germane to the patentability of the

apparatus and have not been given patentable weight. The patentability of the product does not depend on its method of production. If the product in the product by process claim is the same or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process". In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966(Fed. Cir. 1985). In this instance it is obvious that molding the magnetic target in situ on the metallic insert can be done together, as Vasilescu et al teaches molding of different parts (abstract).

3. Regarding claim 3, Abadia et al (Fig 12,50,60 and 44,45) teaches that the magnetic target is fastened on a metallic insert close to the blades. Abadia et al does not explicitly teach that it is fastened by using an adhesive. This is a method of making limitation. The method of making limitations are not germane to the patentability of the apparatus and have not been given patentable weight. The patentability of the product does not depend on its method of production. If the product in the product by process claim is the same or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process". In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966(Fed. Cir. 1985).

4. Regarding claims 4-6, Vasilescu et al and Abadia et al (Fig 12,50,60 and 44,45) teaches mounting of a magnetic target near a fan blade except for mounting it in various locations (such as on a tubular portion of the metallic insert or internal / external wall of the tubular portion). It would have been obvious to one having ordinary skill in the art at

the time the invention was made to mount the magnetic target on a tubular portion of the metallic insert or the internal or external walls thereof, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japiske*, 86 USPQ 70. The motivation to do so would be it would ease packaging, assemblage, reduce cost and provide for a more efficient device.

5. Regarding claim 8, Abadia et al (paragraph [0012]) teaches that the magnetic material of the target comprises ferrites or rare earths.

6. Regarding independent claim 10, Vasilescu et al teaches:

A fan for an alternator-starter, fixed on a rotor with magnetic poles of the alternator-starter fixed on a rotor with magnetic poles of the alternator-starter, the fan comprising (abstract):

a metallic insert fixed on the rotor (abstract),

a radial web and at least one fan blade, which are plastic material molded on the metallic insert (abstract and Fig 11),

wherein said metallic insert (Fig 10,65) is disposed separate and apart from said at least one fan blade (Fig 10,69 shows that it is located radially separate and apart from the metallic insert).

Vasilescu et al do not teach "a magnetic target which, in association with at least one sensor, ensures magnetic following of the rotation of the rotor and a crown element of plastic material constituting a shroud ring, with at least some of the blades of the fan

extending from the web to the crown element, said crown element formed to direct an air stream radially toward the center of the radial web”.

Abadia et al teaches “a magnetic target (Fig 12,50) with a sensor (Fig 1,52) which ensures magnetic following of the rotor (Col 1 ll 43-50), and a crown element of plastic material constituting a shroud ring (Fig 3,by numeral 60 and Fig 4 and element 143), with at least some of the blades of the fan extending from the web to the crown element (Fig 4), said crown element formed to direct an air stream radially toward the center of the radial web (Fig 4 shows that the air flow would be directed towards the center). It is well known in the art to use sensors to detect movement or position of elements. It is also well known to use shroud rings to direct or re-direct air flow in the desired direction/location and that a shroud ring can be used to deflect air radially inwards or in any desired direction by changing its form or shape. It would have been obvious to a person having ordinary skills in the art at the time the invention was made to modify the device of Vasilescu et al to have the rotor positioning devices as taught by Abadia et al. The motivation to do so would be that it would allow for detection of an angular position of a rotor with axial or radial readings, and to carry out tracking of the rotation of rotor for high speeds thereof (Col 1 ll 28-36 and Col 2 ll 1-4 of Abadia et al).

It would also have been obvious to one having ordinary skill in the art at the time the invention was made to arrange the magnetic target to be disposed so that it would be separate and apart from at least one fan blade, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japiske*, 86 USPQ 70.

Vasilescu et al and Abadia et al discloses the claimed invention except for literal teaching for the shroud ring to be in a shape or form to allow the air to be deflected radially inwards. It would have been an obvious matter of design choice to change the shape of the shroud ring to allow air to be deflect radially inward, since such a modification would have involved a mere change in the shape of a component. A change in shape is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955). The motivation to do so would be based on the parameters of available space, size and cost of the parts and the overall efficiency desired of the device.

7. Regarding claims 11,12 and 20, Vasilescu et al and Abadia et al disclose the claimed invention except for mounting the magnetic target in various locations (such as against inner circumference of cover / on the crown element/ facing away from the radial web). It would have been obvious to one having ordinary skill in the art at the time the invention was made to mount the magnetic target on the cover or inner circumference thereof, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japiske*, 86 USPQ 70.

8. Regarding claim 14, Vasilescu et al teaches that the blades are of complex form (Fig 5).

9. Regarding claims 15, Vasilescu et al teaches that the fan blades are spaced apart over at least two stages (Col 7 ll 4-6 and Figs 6-8).

10. Regarding claims 18 and 19, Vasilescu et al and Abadia et al teaches mounting of a magnetic target on a fan blade except for mounting it in various locations (such as on a tubular portion of the metallic insert or internal / external wall of the tubular portion). It would have been obvious to one having ordinary skill in the art at the time the invention was made to mount the magnetic target on a tubular portion of the metallic insert or the internal or external walls thereof, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japiske*, 86 USPQ 70.

Claims 7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vasilescu et al (US 7168923) and Abadia et al (US 2002/0158523) in view of Lopatinsky (US 6194798)

11. Regarding claim 7, Lopatinsky teaches that the magnetic target comprises a magnetic material combined with the plastics material of the web and/or fan blades (abstract).

Vasilescu et al and Abadia et al disclose the claimed invention except for explicitly mentioning that the magnetic target is made of combination of magnetic material and plastic. Lopatinsky teaches the use of molding plastic with other elements. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the magnetic target of a combination of magnetic material and plastic or entirely of plastic or metal, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended

use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416. The motivation to combine the magnetic material with plastic would be to reduce weight and cost of the device.

12. Regarding claim 9, Lopatinsky teaches that the magnetic material of the target is a magnetic plastic material (abstract).

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vasilescu et al (US 7168923) and Abadia et al (US 2002/0158523) further in view of Gold (US 4588911)

13. Regarding claim 13 Gold teaches that the fan constitutes a powder pot for the connecting wires of the rotor (Col 2 ll 40-53).

Vasilescu et al teaches the device as claimed. Vasilescu et al do not teach the use of a magnetic target and sensor. Abadia et al teaches the use of a target and sensor. Abadia et al do not teach the use of an epoxy resin to attach the rotor wires. Gold teaches the use of epoxy resin (Col 2 ll 40-53). It would have been obvious to a person having ordinary skills in the art at the time the invention was made to use the epoxy resin disclosed by Gold to attach the rotor wires of Vasilescu et al and Abadia et al's device. The motivation to do so would be that it would secure the wires and provide proper orientation and interconnection between parts (Col 1 ll 33-39 of Gold).

Response to Arguments

14. Applicant's arguments with respect to claims 1-15, 18-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to NAISHADH N. DESAI whose telephone number is (571)270-3038. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Quyen Leung can be reached on (571) 272-8188. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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